Fig. 1

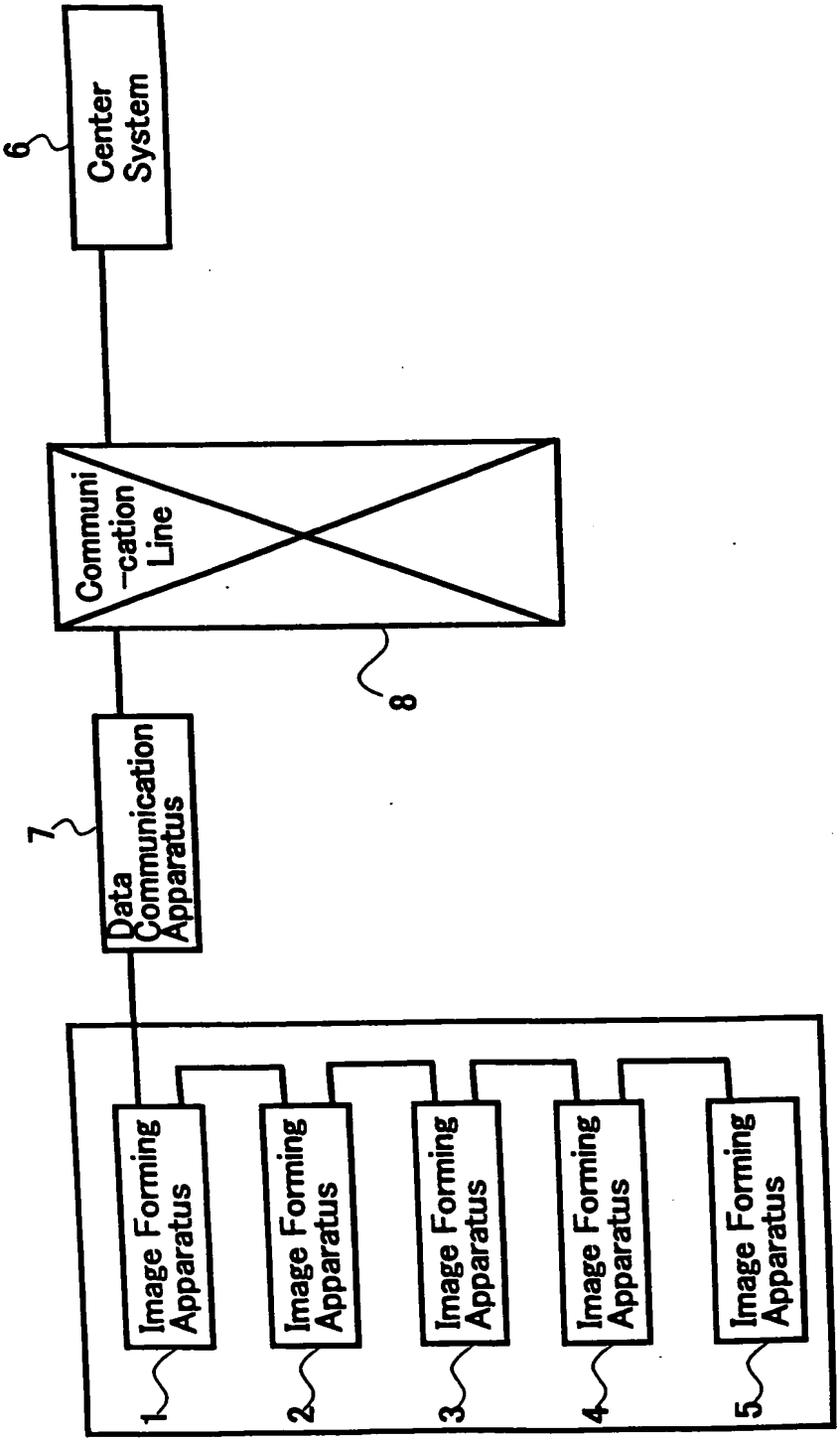

Center System
6
Communi-cation Line
8
Data Communication Apparatus
7
Image Forming Apparatus
1
Image Forming Apparatus
2
Image Forming Apparatus
3
Image Forming Apparatus
4
Image Forming Apparatus
5

Fig. 2

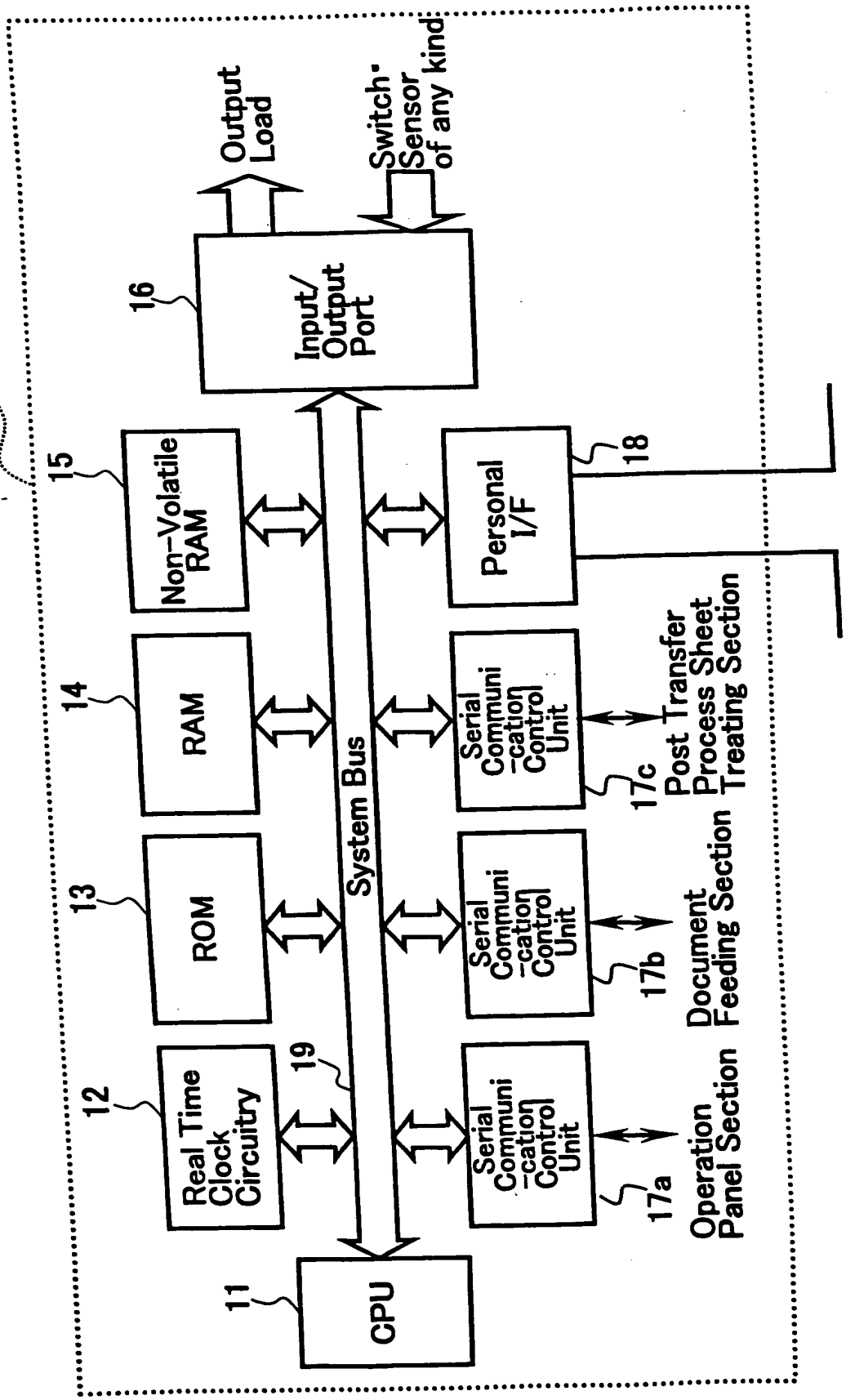

1~5
11
CPU
12
Real Time Clock Circuitry
13
ROM
14
RAM
15
Non-Volatile RAM
16
Input/ Output Port
Output Load
Switch· Sensor of any kind
17a
Operation Panel Section
17b
Document Feeding Section
17c
Post Transfer Process Sheet Treating Section
18
Personal I/F
19
System Bus
Serial Communi -cation Control Unit
Serial Communi -cation Control Unit
Serial Communi -cation Control Unit

Fig. 3

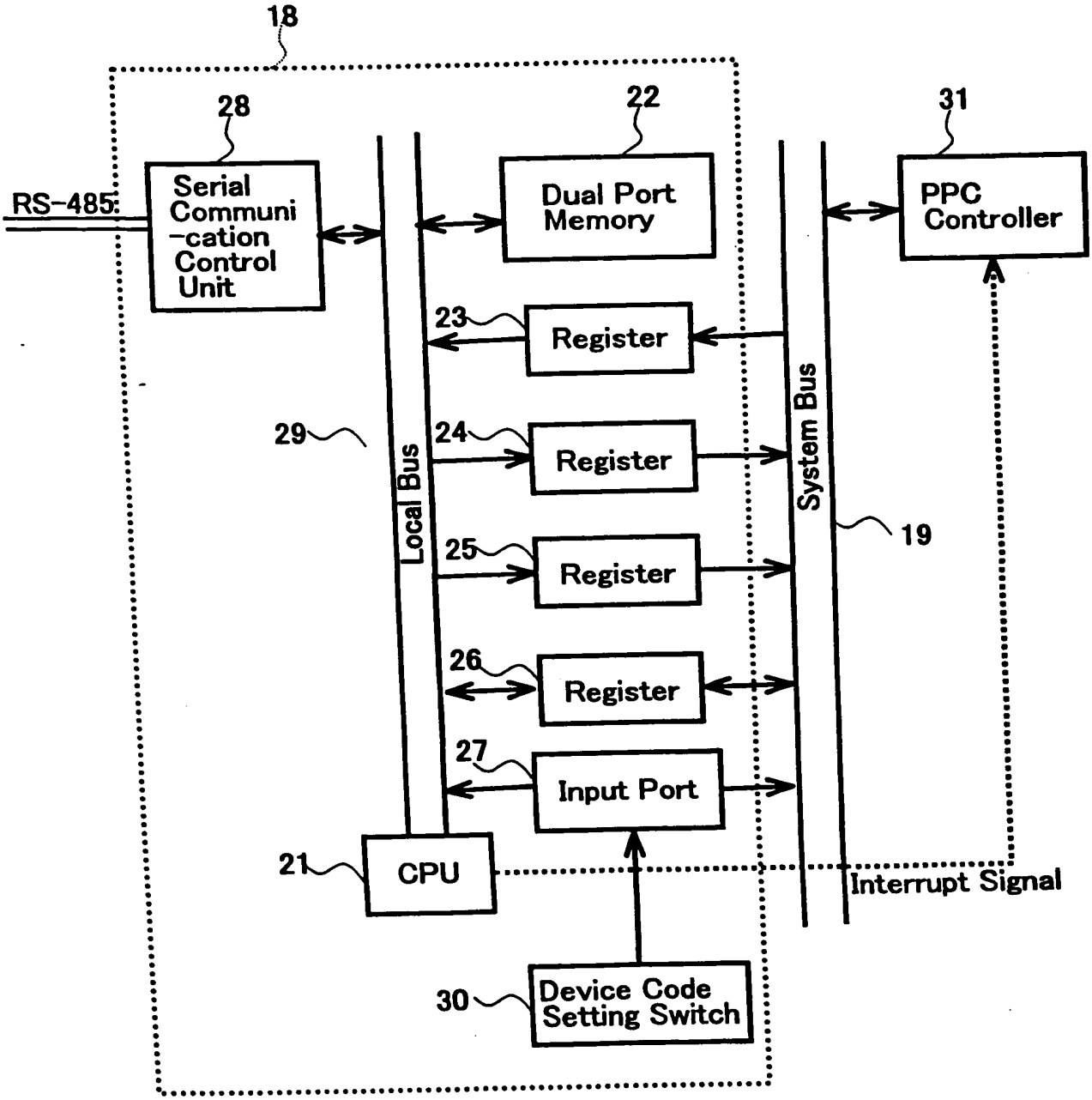

18
28
22
31
RS-485
Serial Communi -cation Control Unit
Dual Port Memory
PPC Controller
23
Register
29
24
Register
Local Bus
System Bus
19
25
Register
26
Register
27
Input Port
21
CPU
Interrupt Signal
30
Device Code Setting Switch

FIG. 4

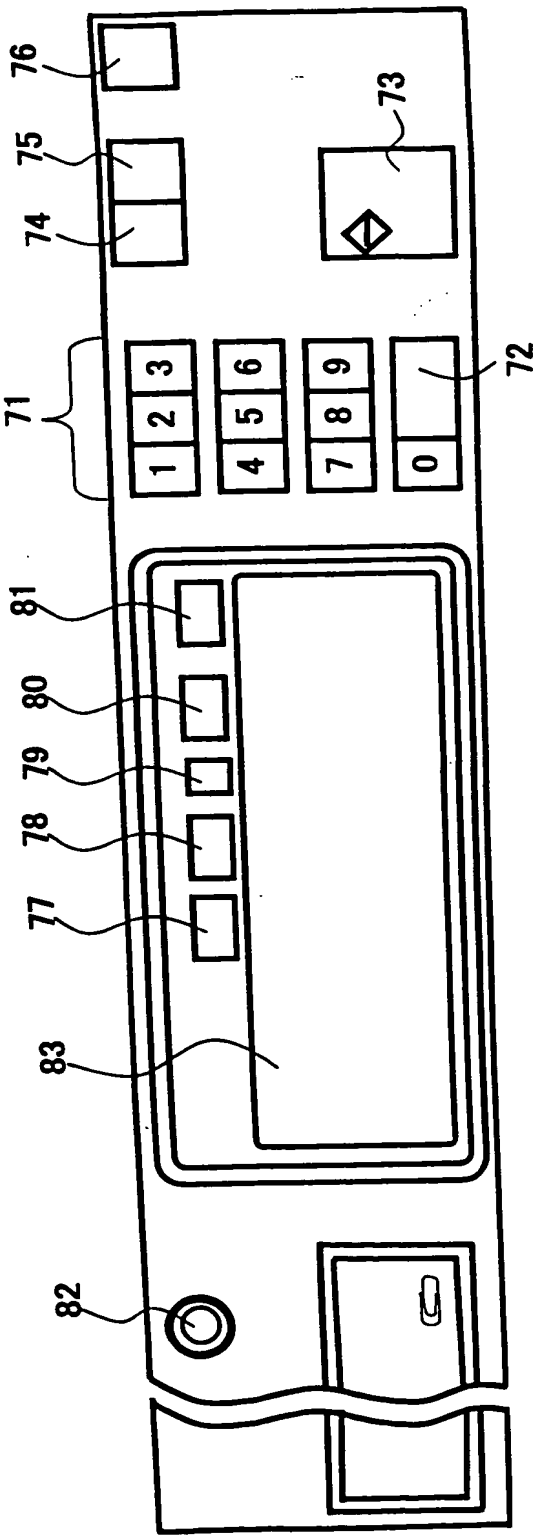


Fig. 5

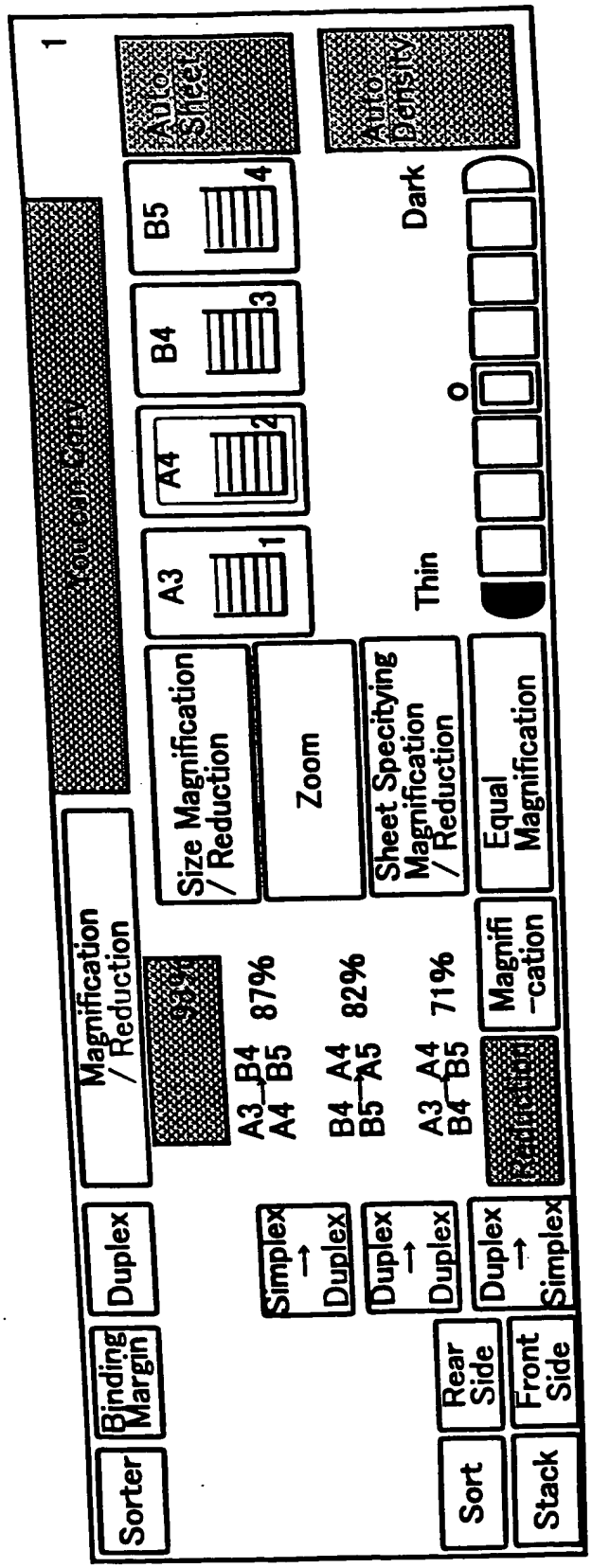

1
Auto Sheet
Auto Density
Dark
Thin
B5
4
B4
3
A4
2
A3
1
Size Magnification / Reduction
Zoom
Sheet Specifying Magnification / Reduction
Equal Magnification
Magnifi -cation
Magnification / Reduction
A3 B4 A4 B5 87%
B4 A4 B5 A5 82%
A3 A4 B4 B5 71%
Simplex → Duplex
Duplex → Duplex
Duplex → Simplex
Duplex
Binding Margin
Rear Side
Front Side
Sort
Stack
Sorter

Fig. 6

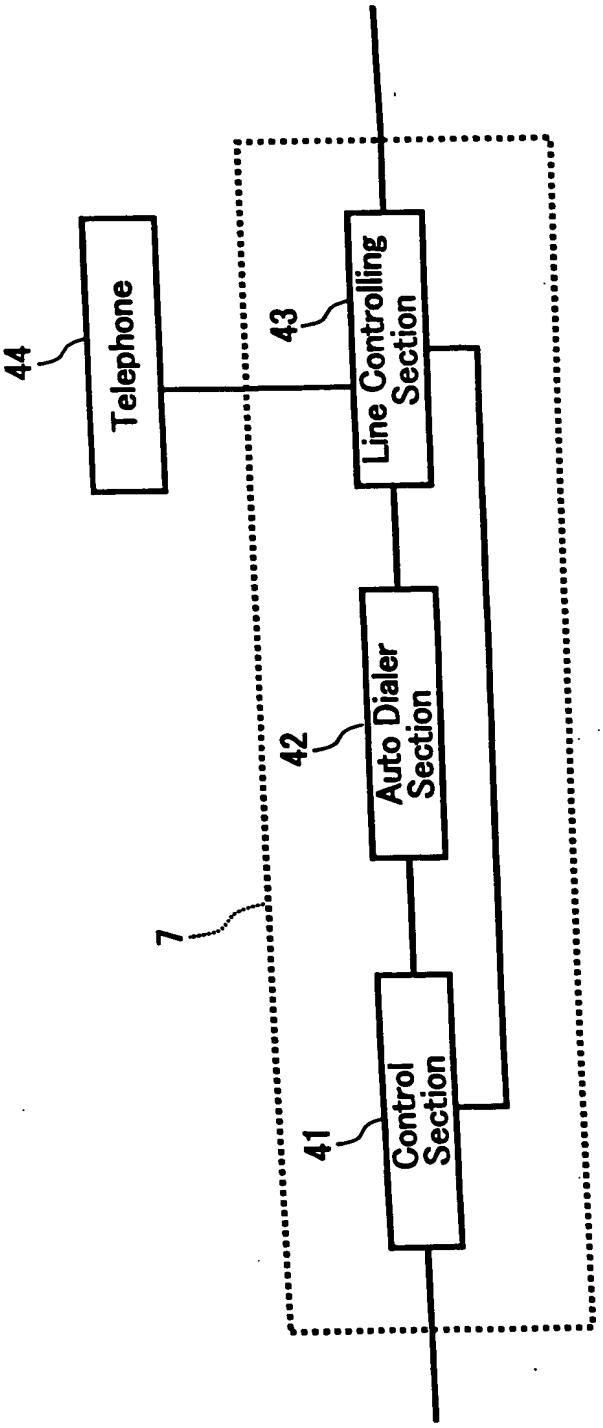

Telephone
44
Line Controlling Section
43
Auto Dialer Section
42
Control Section
41
7

Fig. 7

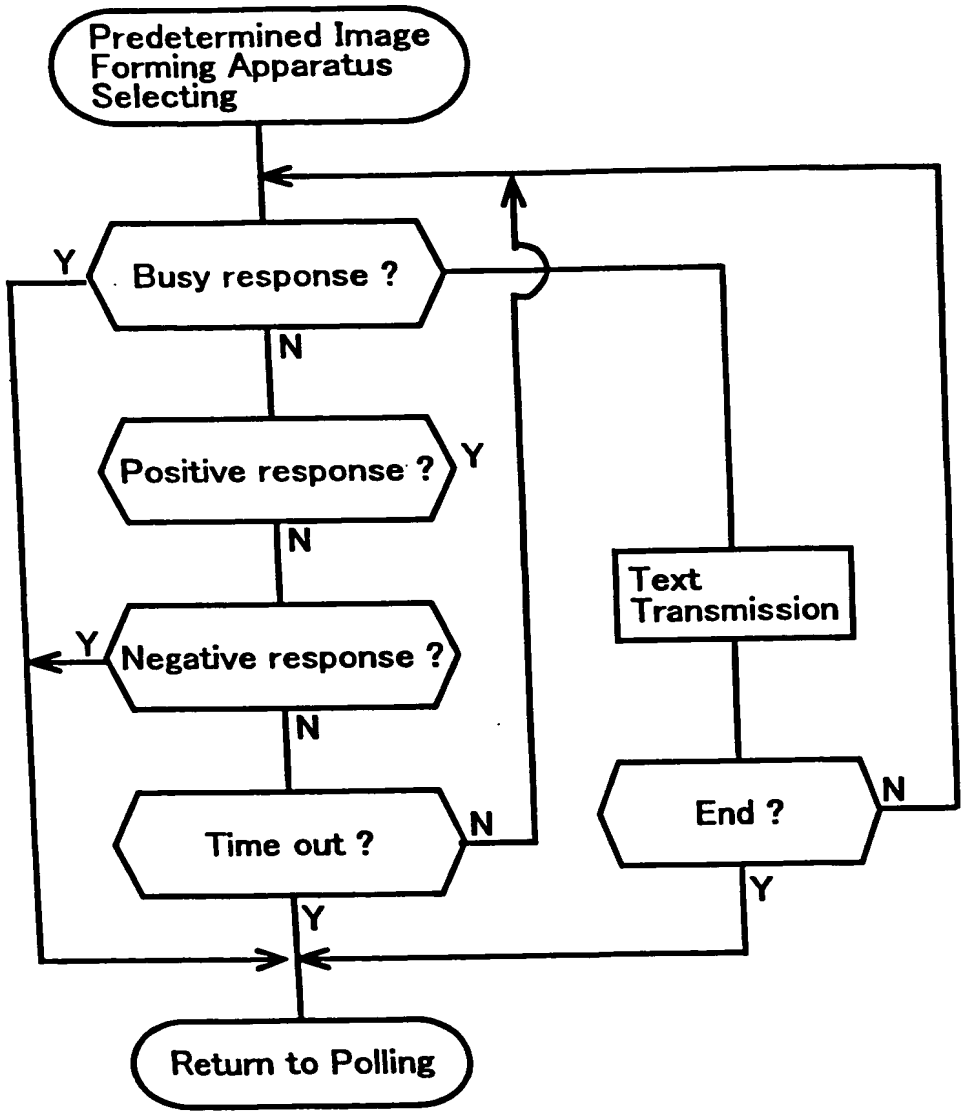

Predetermined Image Forming Apparatus Selecting
Busy response ?
Y
N
Positive response ?
Y
N
Negative response ?
Y
N
Time out ?
N
Y
Text Transmission
End ?
N
Y
Return to Polling

FIG. 8

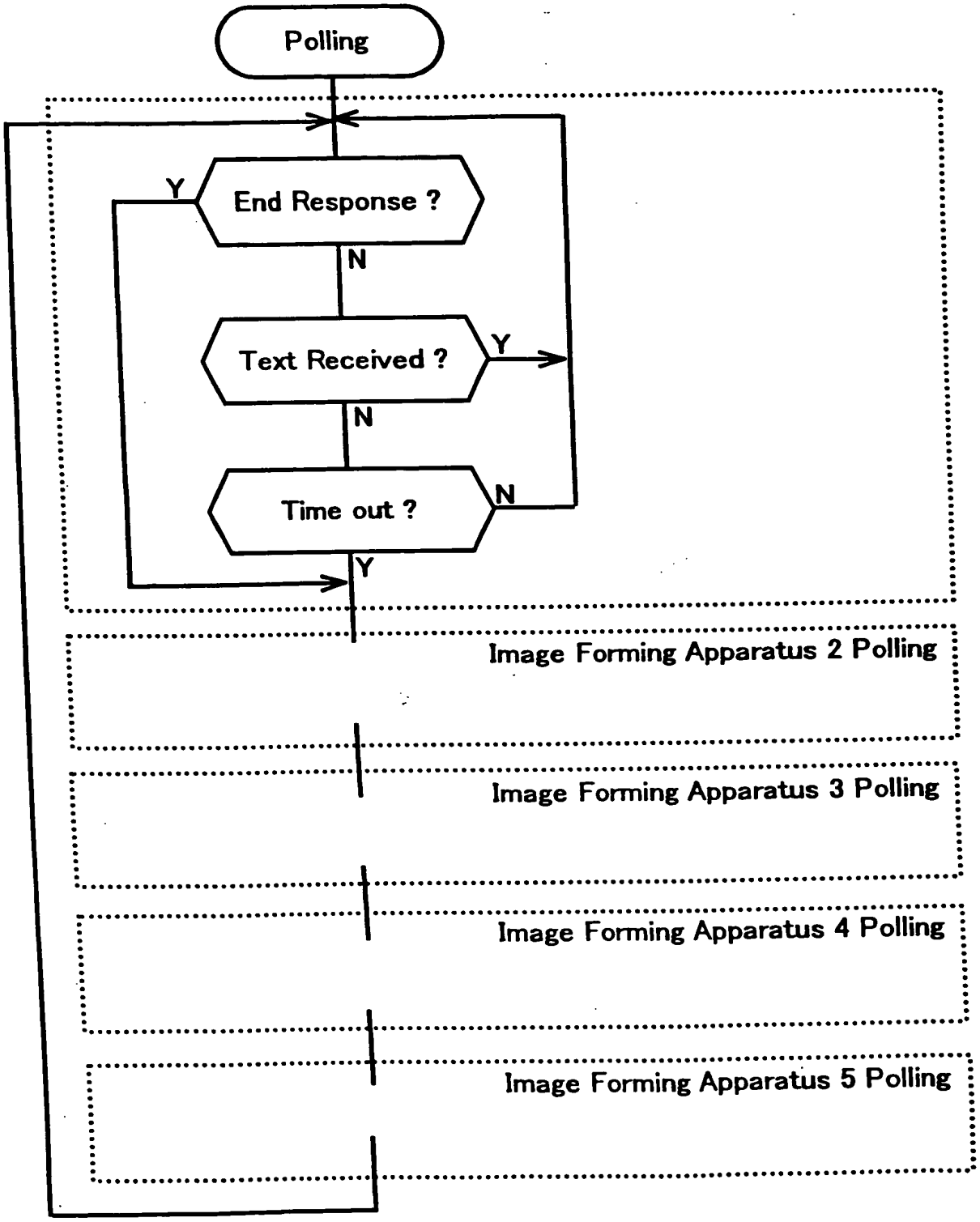
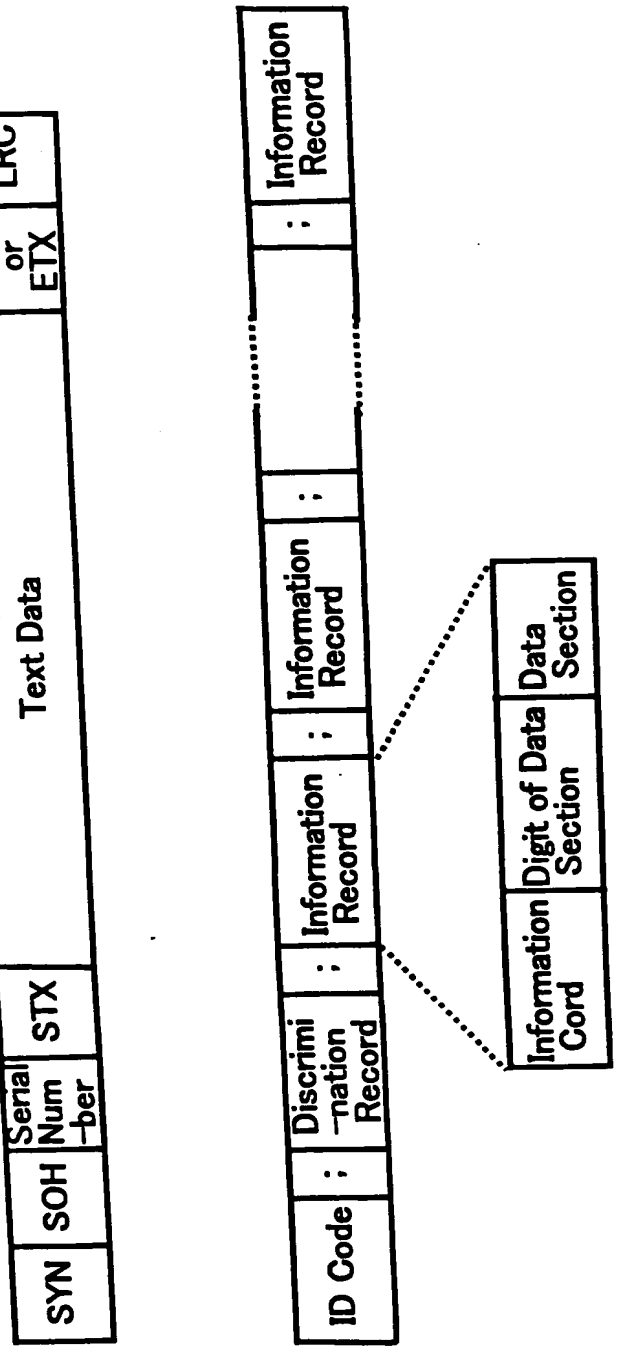

Polling
End Response ?
Y
N
Text Received ?
Y
N
Time out ?
N
Y
Image Forming Apparatus 2 Polling
Image Forming Apparatus 3 Polling
Image Forming Apparatus 4 Polling
Image Forming Apparatus 5 Polling

FIG. 9


SYN
SOH
Serial Num ber
STX
Text Data
ETB or ETX
LRC
ID Code
Discrimi nation Record
Information Record
Information Record
Information Record
Information Cord
Digit of Data Section
Data Section

00270 "9572560

Fig. 10

Code	Operation Name	Operation Contents
30	SC Call	Auto Report When SC occurs
31	Manual Call	Auto Report When Manual Switch is depressed
32	Alarm Transmission	Auto Report When Alarm occurs
22	Block billing operation	Auto Report of reaching Block Billing Number of Sheet
02	Data Read	Read inside Data of PPC
04	Data Write	Rewrite Inside Data of PPC
03	Execute	Remotely Execute Test etc
08	Device Code Confirming operation	Operation for Checking Communication Function

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0627P0 98126P0

Fig. 11

Code	Data length	Contents
Information Code	11	Code indicating specific Information kind
Data Section Digit	2	Data length of following Data Section. Represent using ASCII Code. 00 When no Data Section.
Data Section	Changeable length	Data of contents of each Information code. No Field when Data Section Digit Number is 00.

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Fig. 12

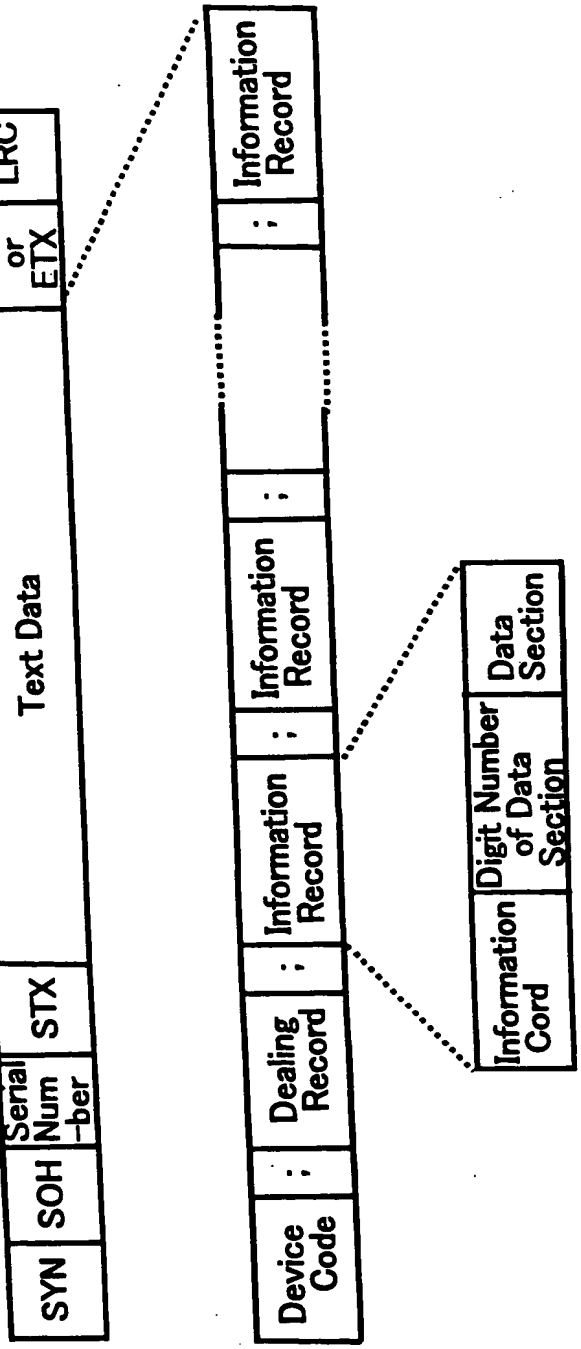

SYN
SOH
Serial Num -ber
STX
Text Data
ETB or ETX
LRC
Device Code
Dealing Record
Information Record
Information Record
Information Record
Information Cord
Digit Number of Data Section
Data Section

Fig. 13

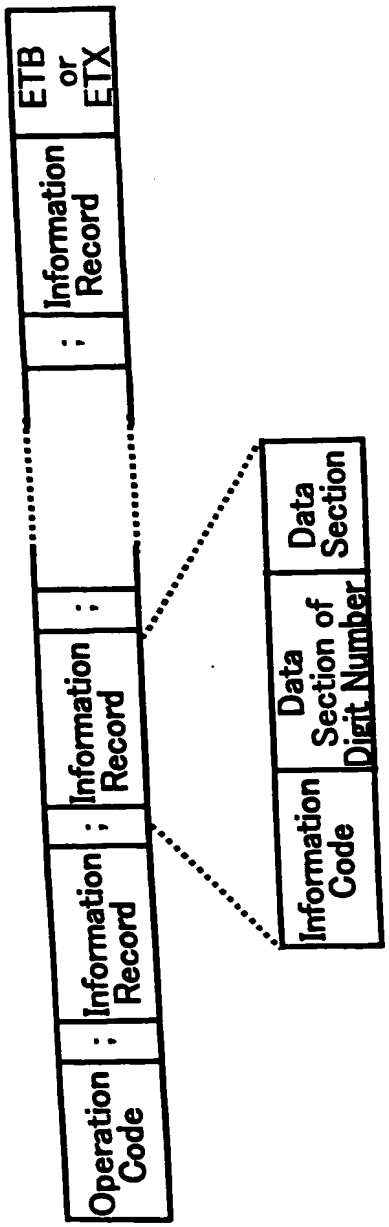

Operation Code
Information Record
Information Record
Information Record
ETB or ETX
Information Code
Data Section of Digit Number
Data Section

Fig. 14

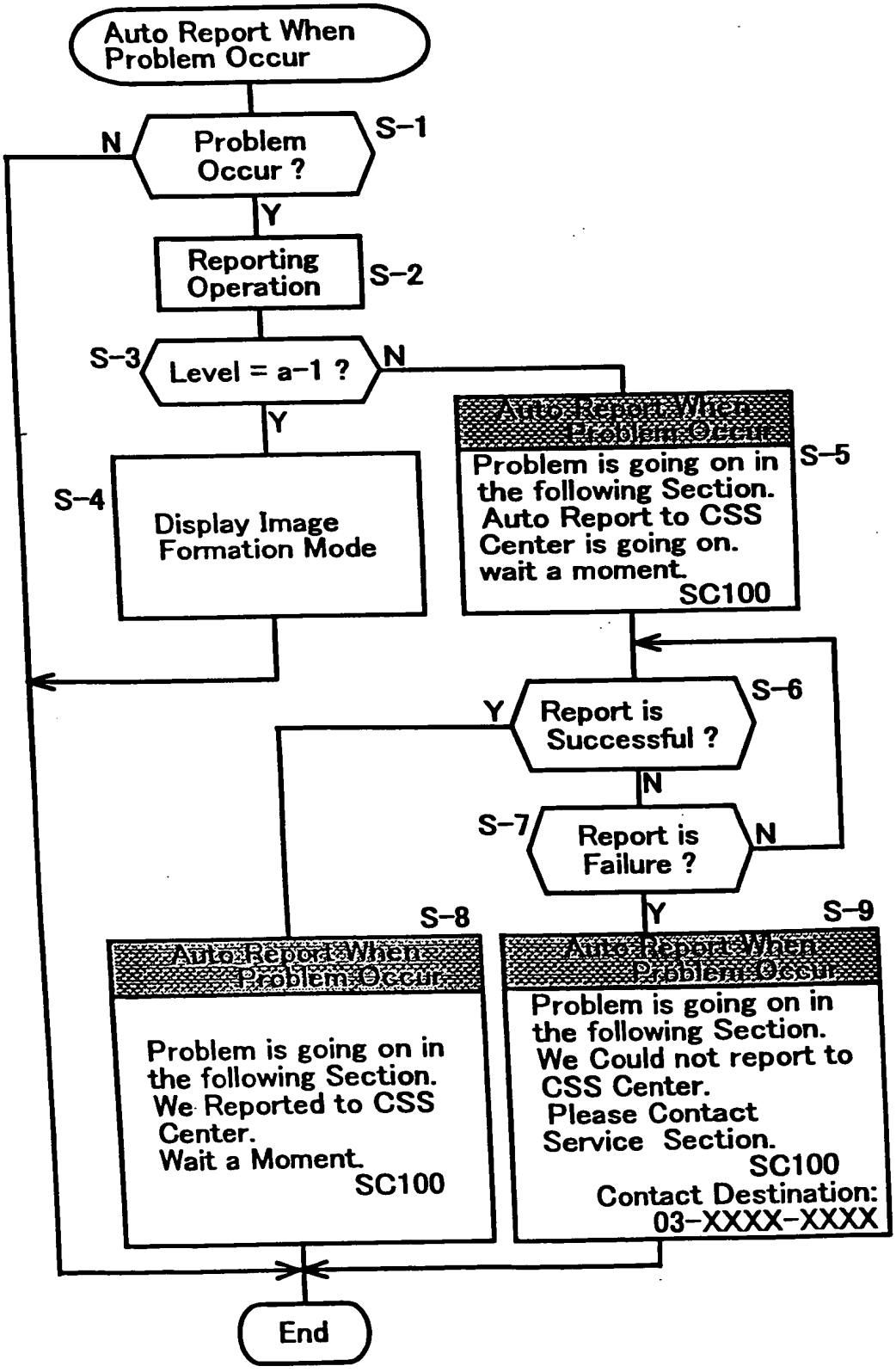

Auto Report When Problem Occur
Problem Occur ?
S-1
N
Y
Reporting Operation
S-2
S-3
Level = a-1 ?
N
Y
S-4
Display Image Formation Mode
Auto Report When Problem Occur
Problem is going on in the following Section. Auto Report to CSS Center is going on. wait a moment.
SC100
S-5
S-6
Report is Successful ?
Y
N
S-7
Report is Failure ?
N
Y
S-8
Auto Report When Problem Occur
Problem is going on in the following Section. We Reported to CSS Center. Wait a Moment.
SC100
S-9
Auto Report When Problem Occur
Problem is going on in the following Section. We Could not report to CSS Center. Please Contact Service Section.
SC100
Contact Destination: 03-XXXX-XXXX
End

FIG. 15

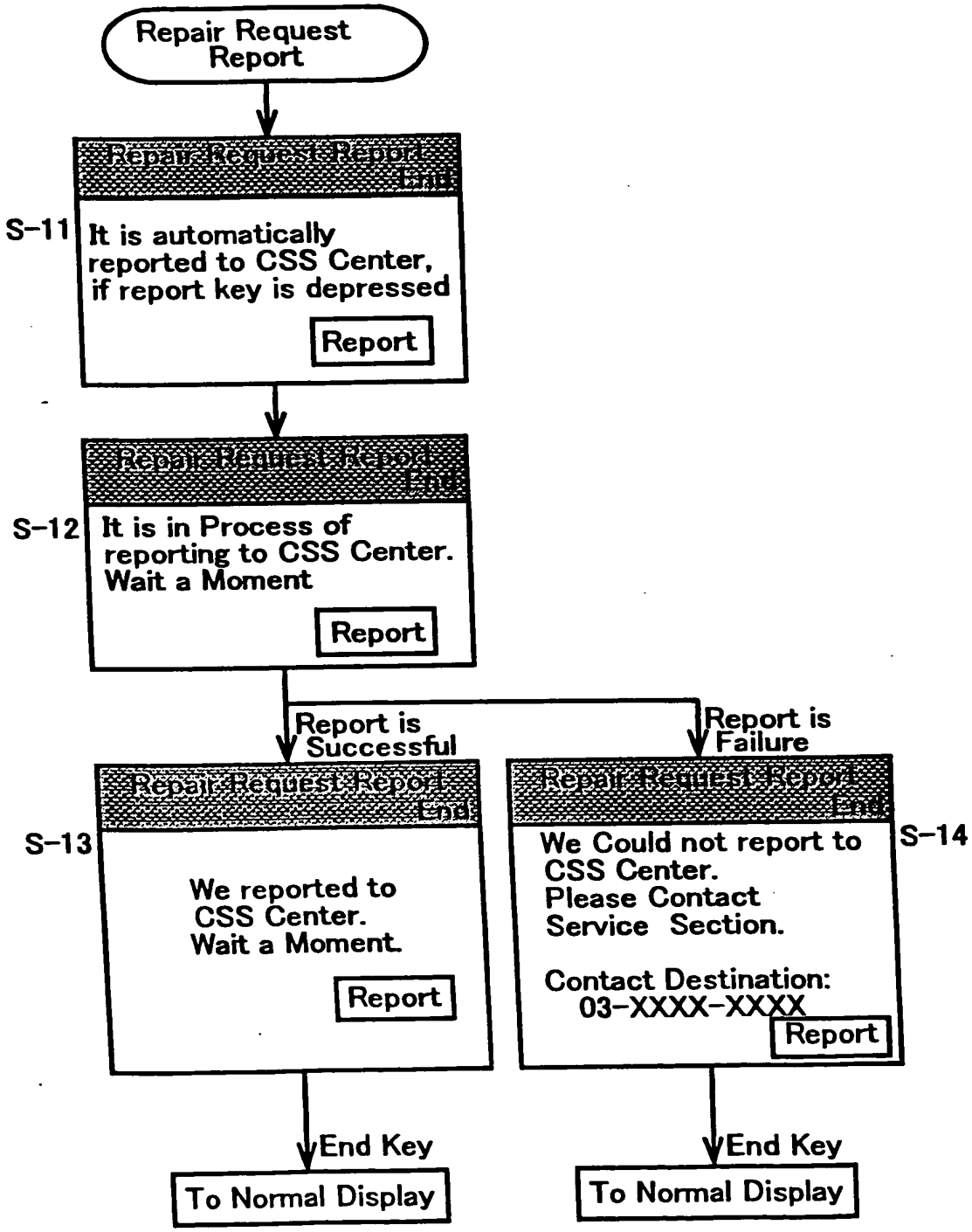

Repair Request Report
Repair Request Report End
S-11
It is automatically reported to CSS Center, if report key is depressed
Report
Repair Request Report End
S-12
It is in Process of reporting to CSS Center. Wait a Moment
Report
Report is Successful
Report is Failure
Repair Request Report End
S-13
We reported to CSS Center. Wait a Moment.
Report
Repair Request Report End
S-14
We Could not report to CSS Center. Please Contact Service Section.
Contact Destination: 03-XXXX-XXXX
Report
End Key
To Normal Display
End Key
To Normal Display

FIG. 16

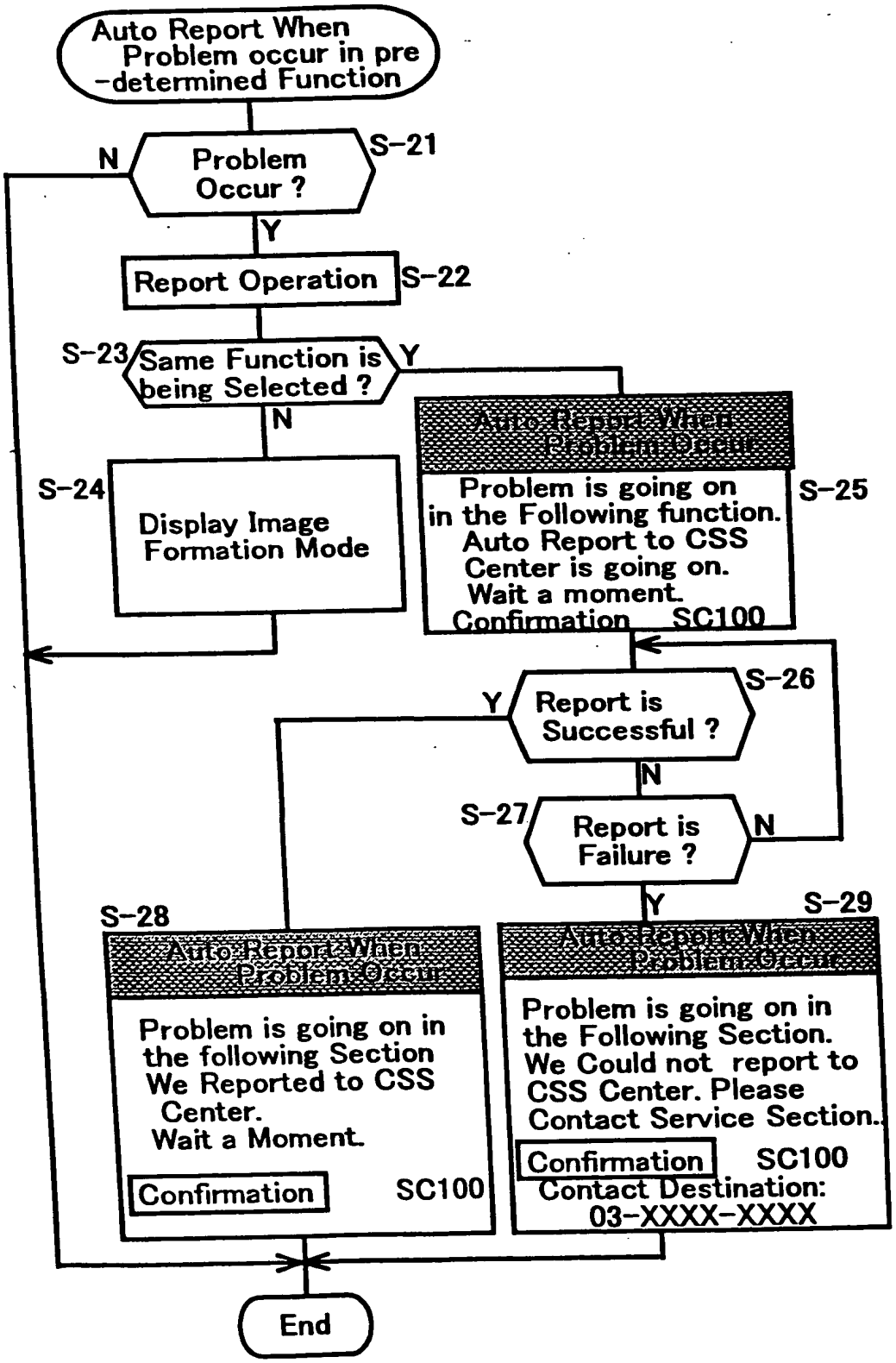

Auto Report When Problem occur in pre -determined Function
Problem Occur ?
S-21
N
Y
Report Operation
S-22
S-23
Same Function is being Selected ?
Y
N
S-24
Display Image Formation Mode
Auto Report When Problem Occur
Problem is going on in the Following function. Auto Report to CSS Center is going on. Wait a moment.
Confirmation SC100
S-25
Report is Successful ?
S-26
Y
N
S-27
Report is Failure ?
N
Y
S-28
Auto Report When Problem Occur
Problem is going on in the following Section We Reported to CSS Center. Wait a Moment.
Confirmation SC100
S-29
Auto Report When Problem Occur
Problem is going on in the Following Section. We Could not report to CSS Center. Please Contact Service Section.
Confirmation SC100
Contact Destination: 03-XXXX-XXXX
End

FIG. 17

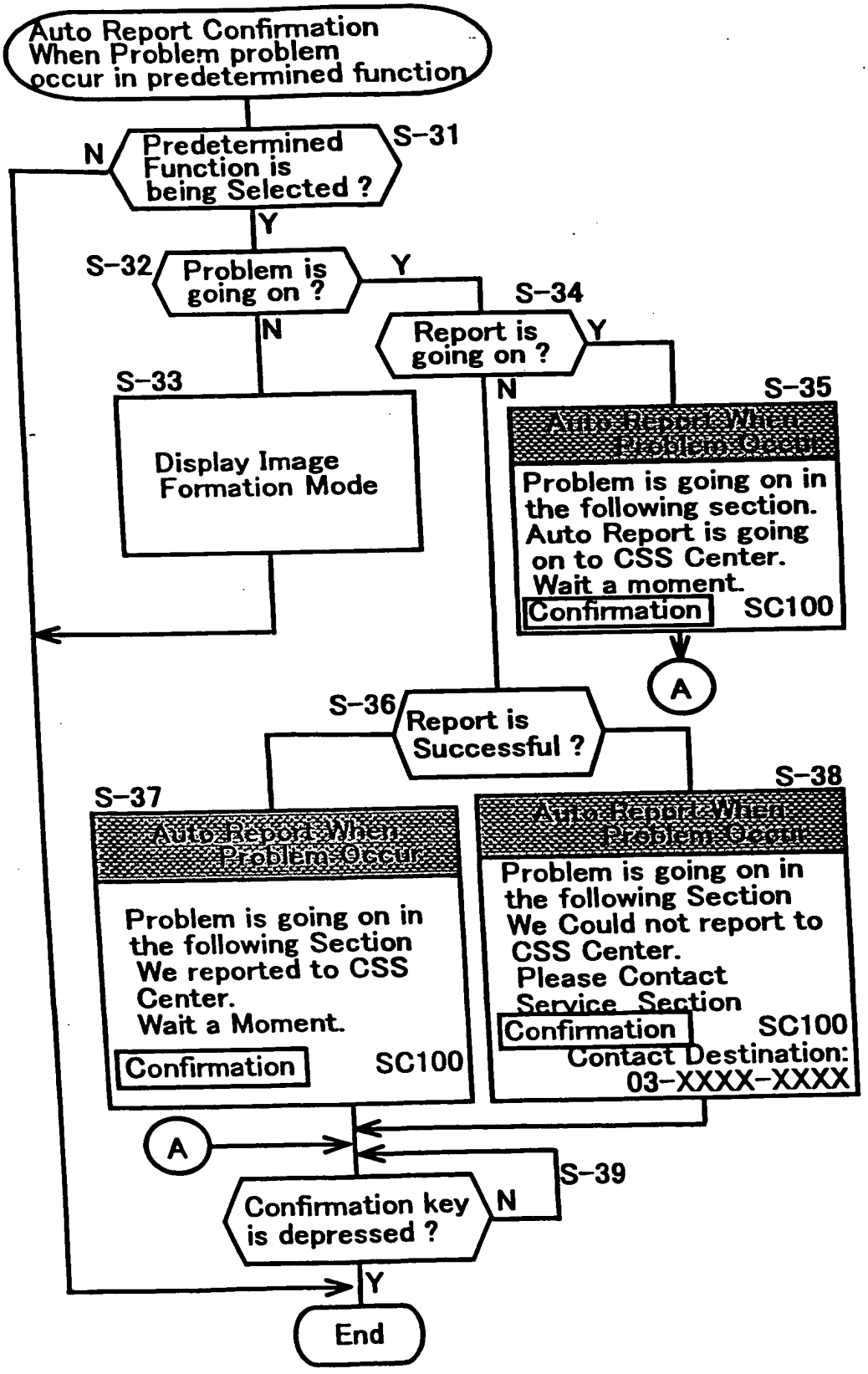

Auto Report Confirmation When Problem problem occur in predetermined function
Predetermined Function is being Selected ?
S-31
N
Y
Problem is going on ?
S-32
Y
N
Report is going on ?
S-34
Y
N
S-33
Display Image Formation Mode
S-35
Auto Report When Problem Occur
Problem is going on in the following section. Auto Report is going on to CSS Center. Wait a moment.
Confirmation
SC100
A
Report is Successful ?
S-36
S-37
Auto Report When Problem Occur
Problem is going on in the following Section We reported to CSS Center. Wait a Moment.
Confirmation
SC100
S-38
Auto Report When Problem Occur
Problem is going on in the following Section We Could not report to CSS Center. Please Contact Service Section
Confirmation
SC100
Contact Destination: 03-XXXX-XXXX
A
Confirmation key is depressed ?
S-39
N
Y
End

Fig. 18

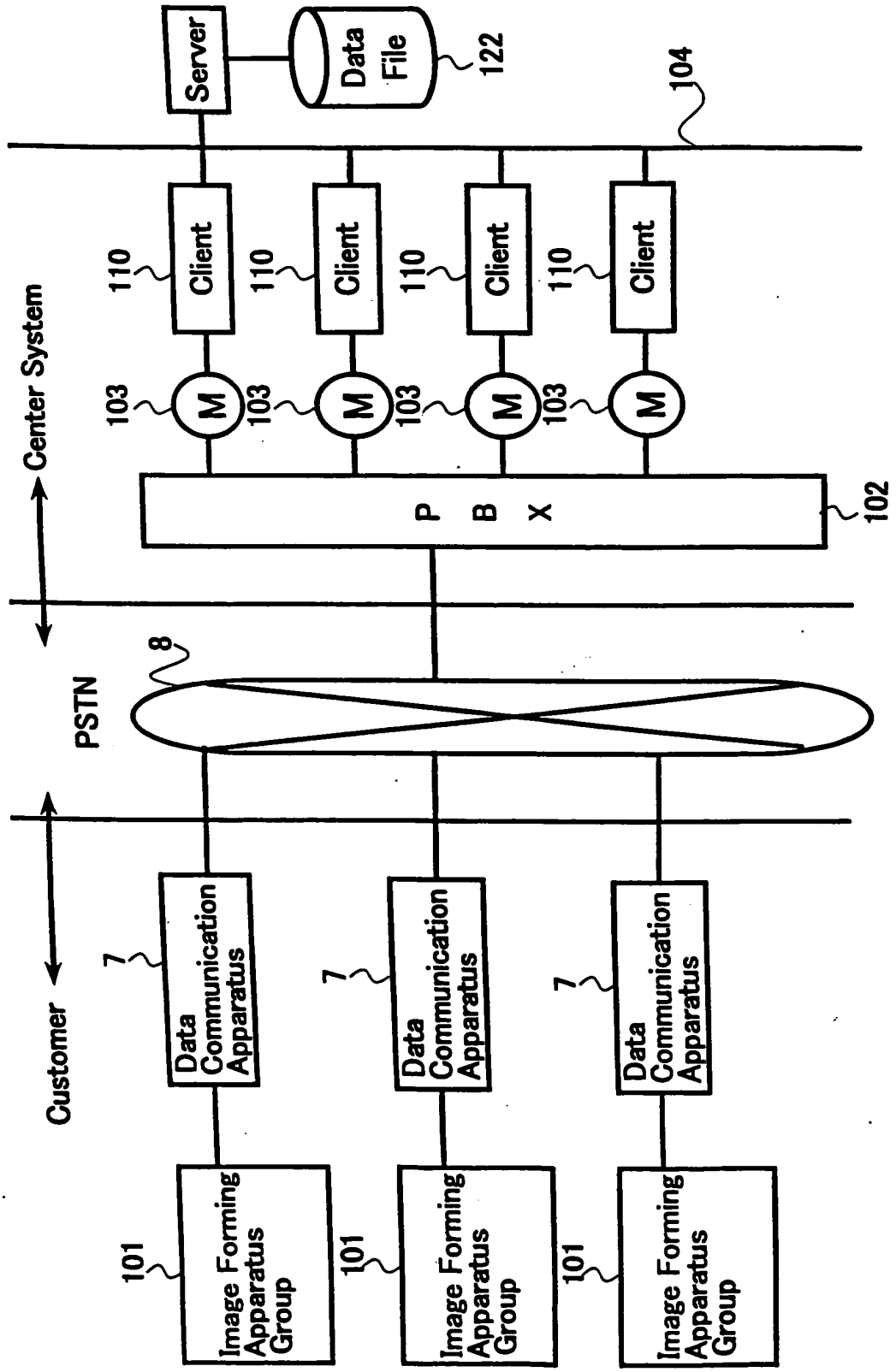

Server
Data File
122
104
Center System
110
Client
103
M
P B X
102
PSTN
8
Customer
7
Data Communication Apparatus
101
Image Forming Apparatus Group

FIG. 19

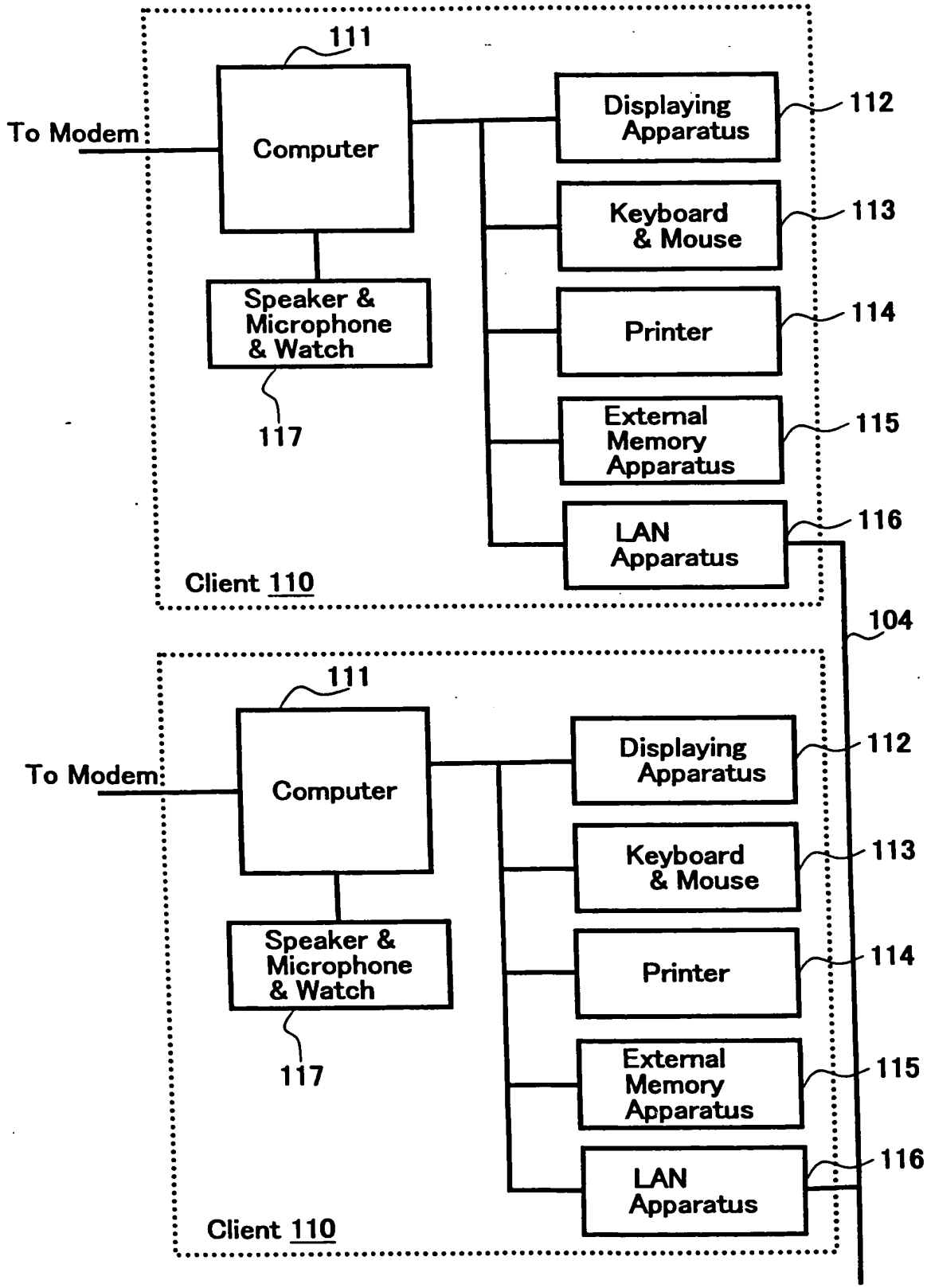
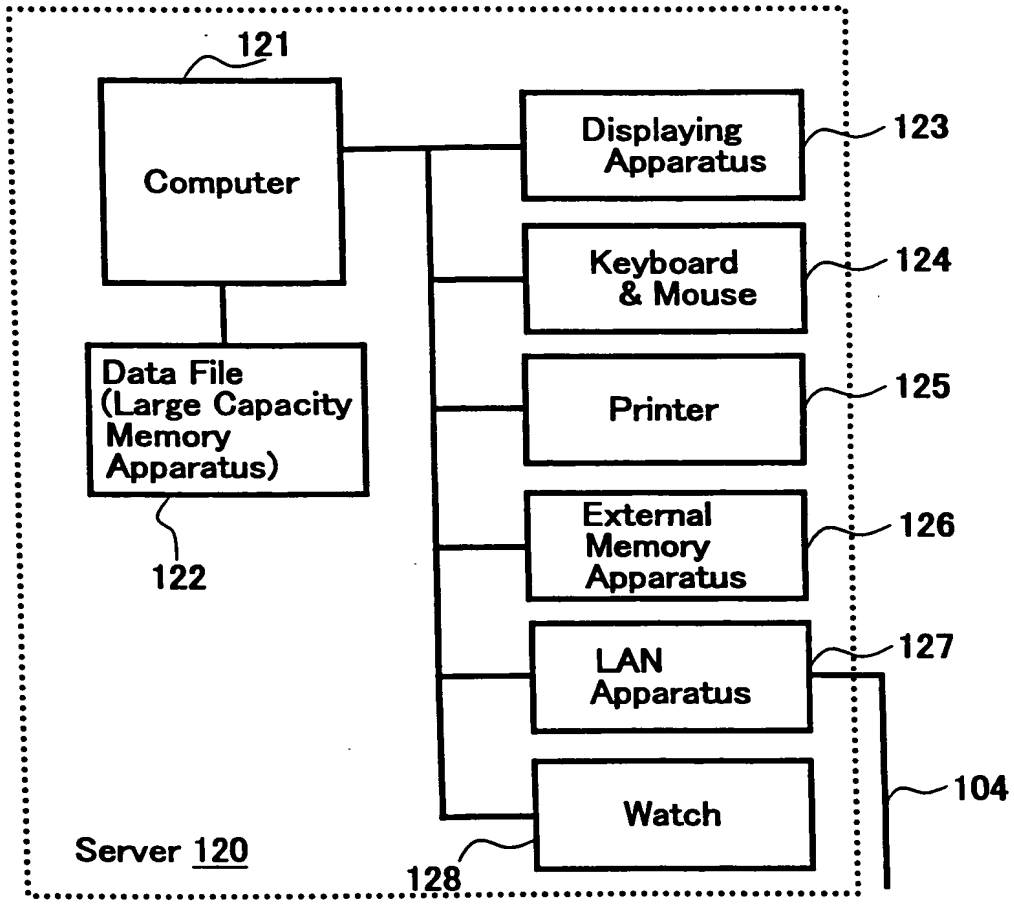

111
To Modem
Computer
Displaying Apparatus
112
Keyboard & Mouse
113
Speaker & Microphone & Watch
Printer
114
117
External Memory Apparatus
115
LAN Apparatus
116
Client 110
104
111
To Modem
Computer
Displaying Apparatus
112
Keyboard & Mouse
113
Speaker & Microphone & Watch
Printer
114
117
External Memory Apparatus
115
LAN Apparatus
116
Client 110

FIG. 20


121
Computer
Displaying Apparatus
123
Keyboard & Mouse
124
Data File (Large Capacity Memory Apparatus)
Printer
125
External Memory Apparatus
126
122
LAN Apparatus
127
Watch
104
Server 120
128

09279 "3tn3ttn3

Fig. 21

SEQ	Customer Name	Model	Machine Number	Inform-ation Kind	Recep-tion time	Arrang-ing Time	Condition	Person in charge	Color Infor-mation	Elapsing Time	Customer Information	Service Information	Others
511	FFF Precision	FFF	FF01	200	11:50	11:50	In Process of Arrangement	Tanaka	Red	3:00		Company A	
512	EEE Commercial firm	EEE	EE01	500	12:10	12:10	In Process of Arrangement	Okada	Blue	0:30	Major Company	Company B	
513	DDD Electric	DDD	DD01	300	12:30	12:33	In Process of Arrangement	Yoshida	Green	0:30		Company A	
514	CCC Machine	CCC	CC01	100	12:48		In Process of Operation	Okada	Green	0:10	Lawyer	Company C	
515	BBB Construction	BBB	BB01	200	12:50		In Process of Operation	Tanaka	Green	0:05		Company A	
516	AAA Trading Company	AAA	AA01	100	13:00				Green	0:00		Company D	
517													
518													
519													

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Fig. 22

SEQ	Customer Name	Telephone Number	Fax Number	Address	Place	Person in charge	Deliv -ery Date	Deliv -ered Machine	Machine Number	Service Company	Telephone Number	Fax	Others
001	AAA Trading Company	03-1234 -5678	03-1234 -5679	Shinba shi, Minato -ku	Import Section	AAA	96/ 1/10	AAAA	AA01	ABC Service	03-5234 -5678	03-5234 -5679	Emergency level High
002	BBB Const -ruction	03-2234 -5678	03-2234 -5679	Shinba shi, Minato -ku	Import Section	BBB	97/ 1/10	BBBB	BB01	ABC Service	03-5234 -5678	03-5234 -5679	
003	CCC Machine	03-3234 -5678	03-3234 -5679	Shinba shi, Minato -ku	Import Section	CCC	97/ 1/22	AAAA	AA02	ABC Service	03-5234 -5678	03-5234 -5679	Bad Relation
004	DDD Electric	03-4234 -5678	03-4234 -5679	Shinba shi, Minato -ku	Import Section	DDD	96/ 10/10	CCCC	CC01	DEF Service	03-9234 -5678	03-9234 -5679	Emergency level High
005	EEE Commercial Firm	03-7234 -5678	03-7234 -5679	Shinba shi, Minato -ku	Import Section	EEE	96/ 9/10	AAAA	AA03	DEF Service	03-9234 -5678	03-9234 -5679	
006	FFF Precision	03-6234 -5678	03-6234 -5679	Shinba shi, Minato -ku	Import Section	FFF	97/ 1/10	DDDD	DD01	ABC Service	03-5234 -5678	03-5234 -5679	Good Relation
007													
008													
009													

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Fig. 23

SEQ	Delivered Machine	Machine Number	Delivery Date	Machine Construction	Problem Career	Repair Career	Machine Information	Design Information	Others
001	AAAA	FF01	96/1/10	112340	97/10/1 Fixing Section JAM	97/102 Sensor was Replaced	TL:12300,JAM:20		
002	BBBB	EE01	97/1/10	120000			TL:12400,JAM:40	97/5/1 Designed around 1	
003	AAAA	DD01	97/1/22	112000			TL:33300,JAM:10		
004	CCCC	CC01	96/10/10	120000			TL:1240,JAM:20		
005	AAAA	BB01	96/9/10	112340	97/10 SC200	97/10/2 Fixing Roller was Replaced SC200	TL:22300,JAM:40		
006	DDDD	AA01	97/1/10	100000			TL:1230,JAM:5	97/5/1 Designed around 2	
007									
008									
009									

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09/2870 "Sheet 24"

Fig. 24

SEQ	Delivered Machine	Machine Number	Information Receiving Date	Item of Information	Information generating Date	Machine Information (Counter Information)	Machine Information (Setting Information)	Other Information
001	AAAA	AA01	96/1/10 10:20	Fixing Section	97/10/1 10:10	TL:12300,JAM:20	Fixing Temperature; 180, Drum Current; 10	ROMVer.1.02
002	AAAA	AA03	97/1/10 20:10	SC200	97/1/10 20:00	TL:12400,JAM:40	Fixing Temperature; 182, Drum Current; 11	ROMVer.1.04
003	CCCC	CC01	97/9/22 01:10	JAM Alarm	97/9/21 09:10	TL:33300,JAM:10	Fixing Temperature; 178, Drum Current; 9	ROMVer.1.12
004	DDDD	DD01	96/9/25 15:20	SC400	96/9/25 15:10	TL:1240,JAM:20	Fixing Temperature; 185, Drum Current; 15	ROMVer.2.02
005								
006								
007								
008								
009								

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Fig. 25

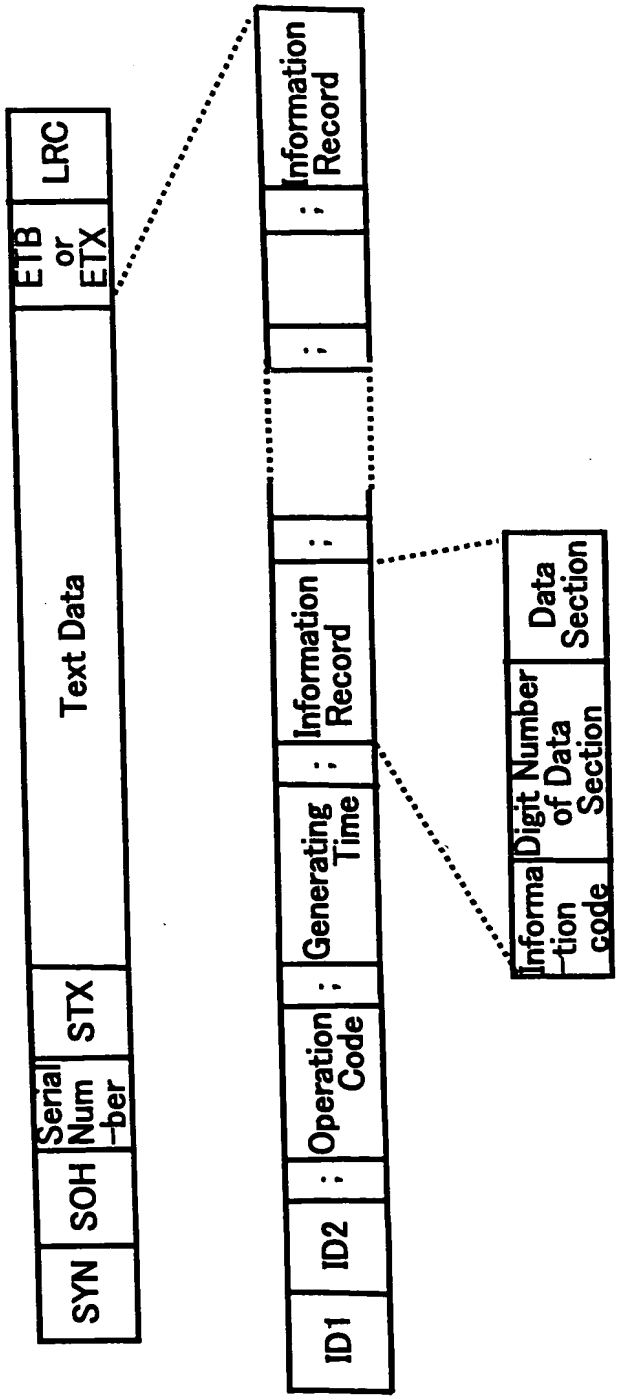
SYN
SOH
Serial Num -ber
STX
Text Data
ETB or ETX
LRC
ID1
ID2
:
Operation Code
:
Generating Time
:
Information Record
:
:
:
Information Record
Informa -tion code
Digit Number of Data Section
Data Section

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Fig. 26

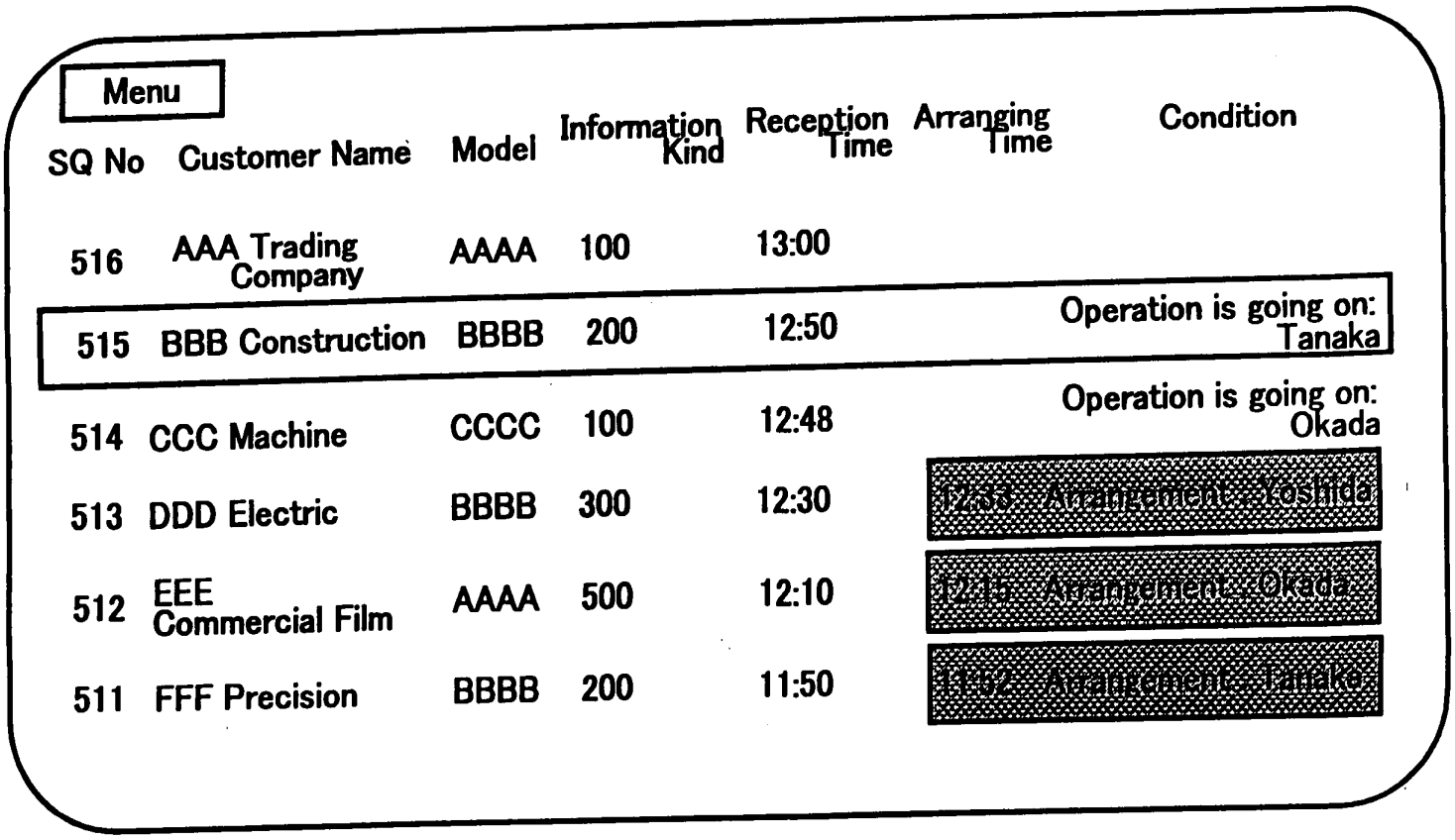

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Fig. 27

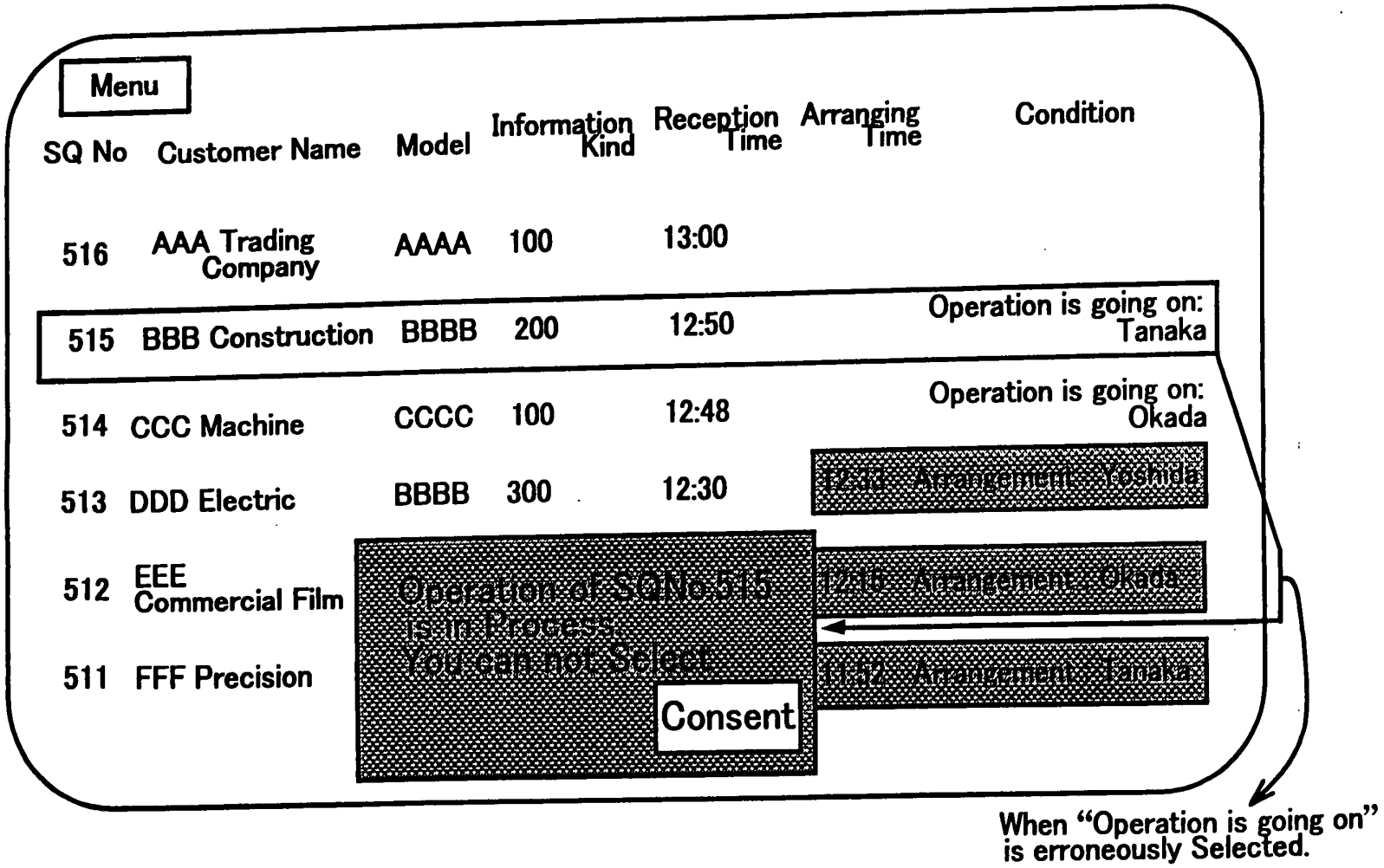

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Fig. 28

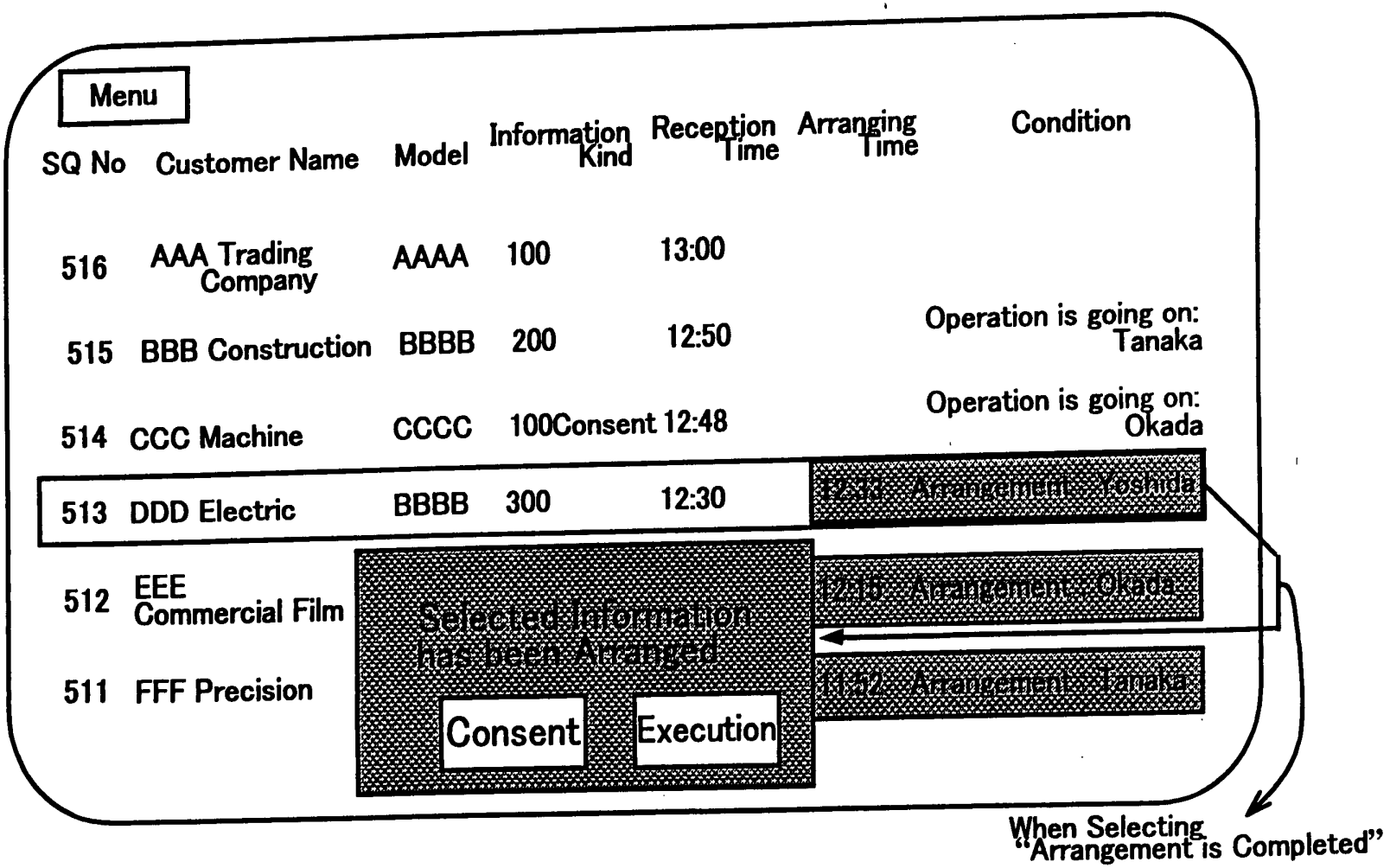


Fig. 29

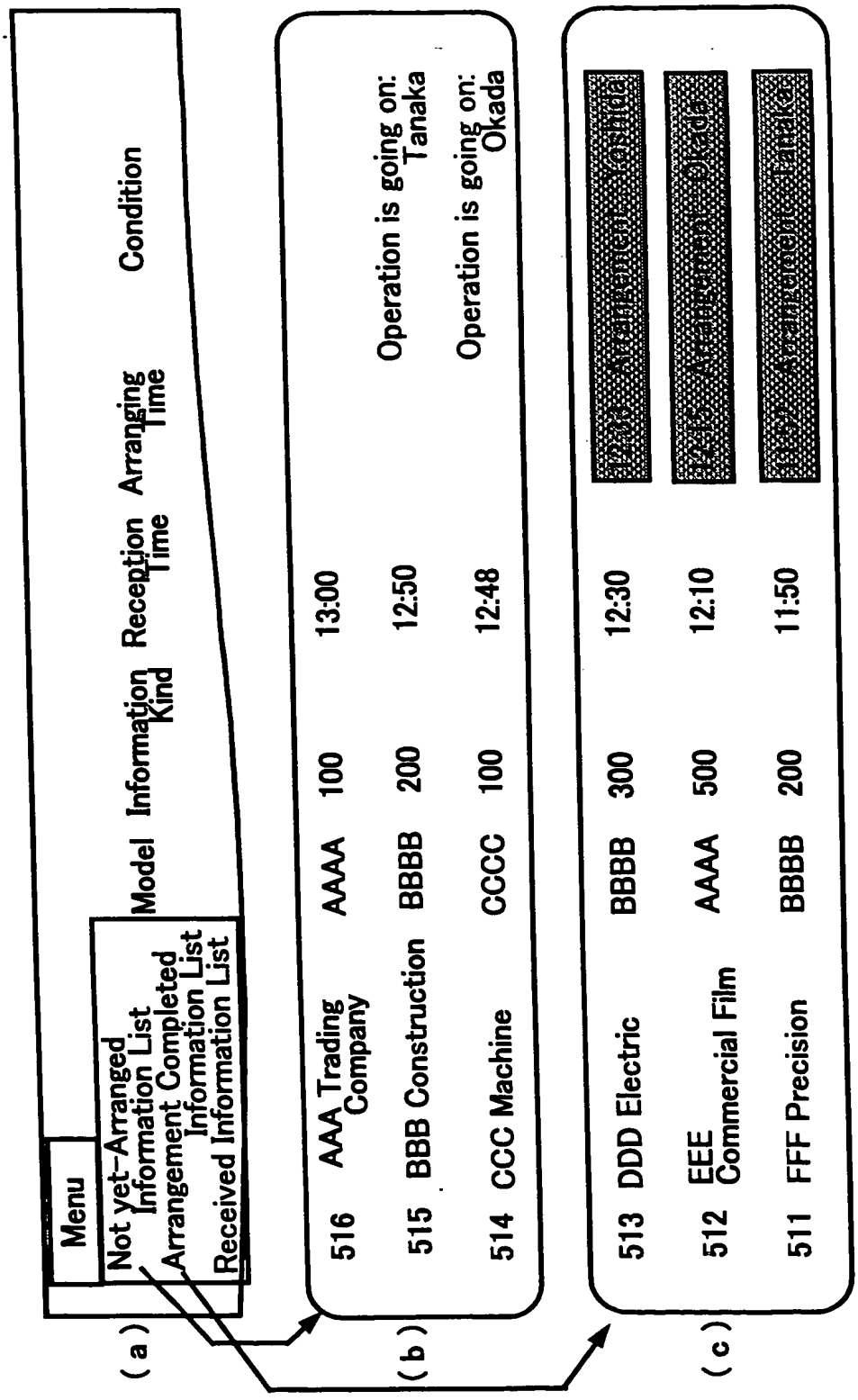
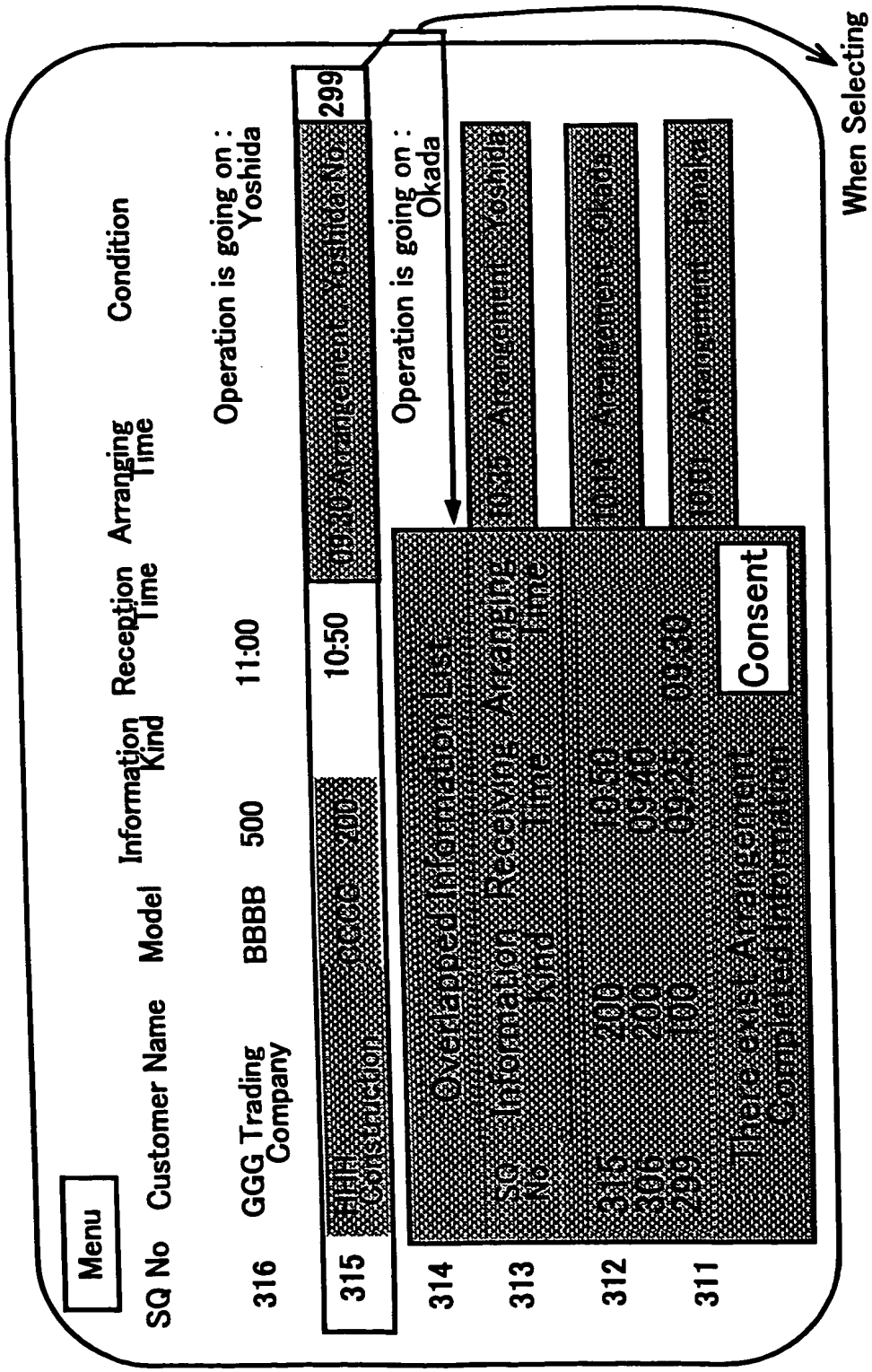

Menu
Not yet-Arranged Information List
Arrangement Completed Information List
Received Information List
(a)
Model
Information Kind
Reception Time
Arranging Time
Condition
516 AAA Trading Company AAAA 100 13:00
515 BBB Construction BBBB 200 12:50 Operation is going on: Tanaka
514 CCC Machine CCCC 100 12:48 Operation is going on: Okada
(b)
513 DDD Electric BBBB 300 12:30 12:06 Arrangement: Yoshida
512 EEE Commercial Film AAAA 500 12:10 12:15 Arrangement: Okada
511 FFF Precision BBBB 200 11:50 11:57 Arrangement: Tanaka
(c)

Fig. 30


Menu
SQ No
Customer Name
Model
Information Kind
Reception Time
Arranging Time
Condition
316
GGG Trading Company
BBBB
500
11:00
Operation is going on : Yoshida
315
FHH Construction
CCCC
400
10:50
09:40 Arrangement Yoshida No. 299
314
313
312
311
Overlapped Information List
SQ No
Information Kind
Receiving Time
Arranging Time
315
400
10:50
306
200
09:40
299
100
09:25
09:30
There exist Arrangement Completed Information
Consent
Operation is going on : Okada
When Selecting

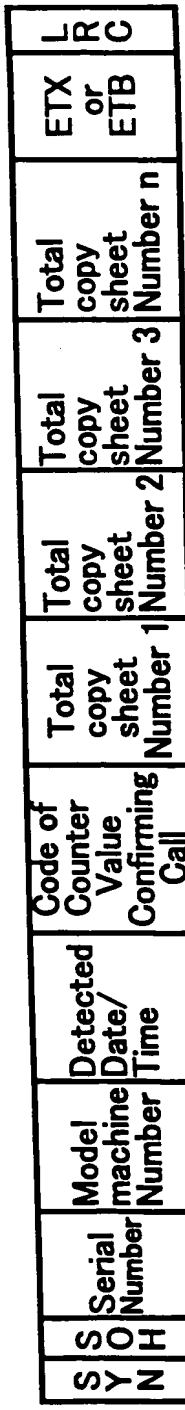

SYN
SOH
Serial Number
Model machine Number
Detected Date/ Time
Code of Counter Value Confirming Call
Total copy sheet Number 1
Total copy sheet Number 2
Total copy sheet Number 3
Total copy sheet Number n
ETX or ETB
LRC

Fig. 31

FIG. 32

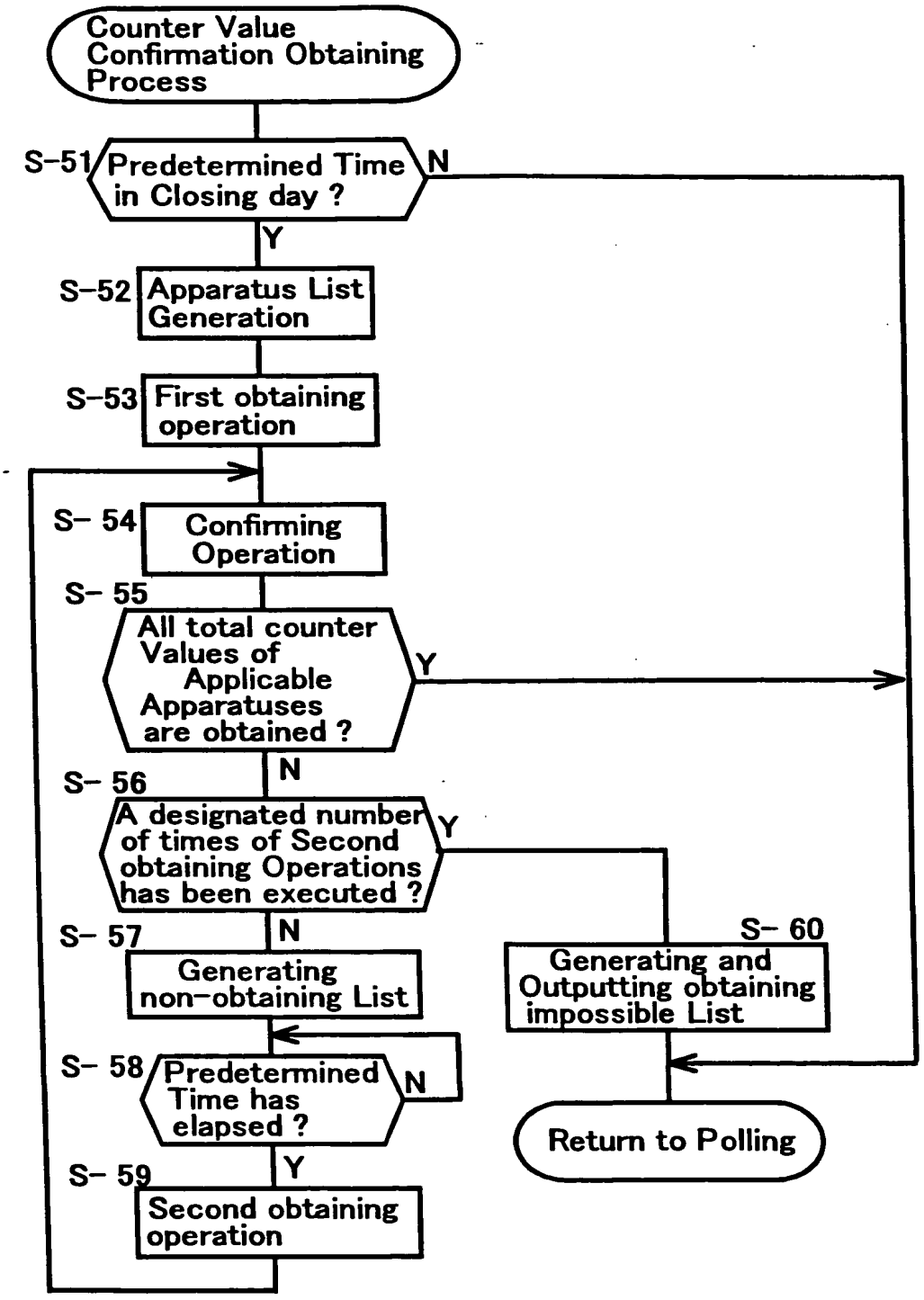

Counter Value Confirmation Obtaining Process
S-51
Predetermined Time in Closing day ?
N
Y
S-52
Apparatus List Generation
S-53
First obtaining operation
S- 54
Confirming Operation
S- 55
All total counter Values of Applicable Apparatuses are obtained ?
Y
N
S- 56
A designated number of times of Second obtaining Operations has been executed ?
Y
N
S- 57
Generating non-obtaining List
S- 58
Predetermined Time has elapsed ?
N
Y
S- 59
Second obtaining operation
S- 60
Generating and Outputting obtaining impossible List
Return to Polling

FIG. 33

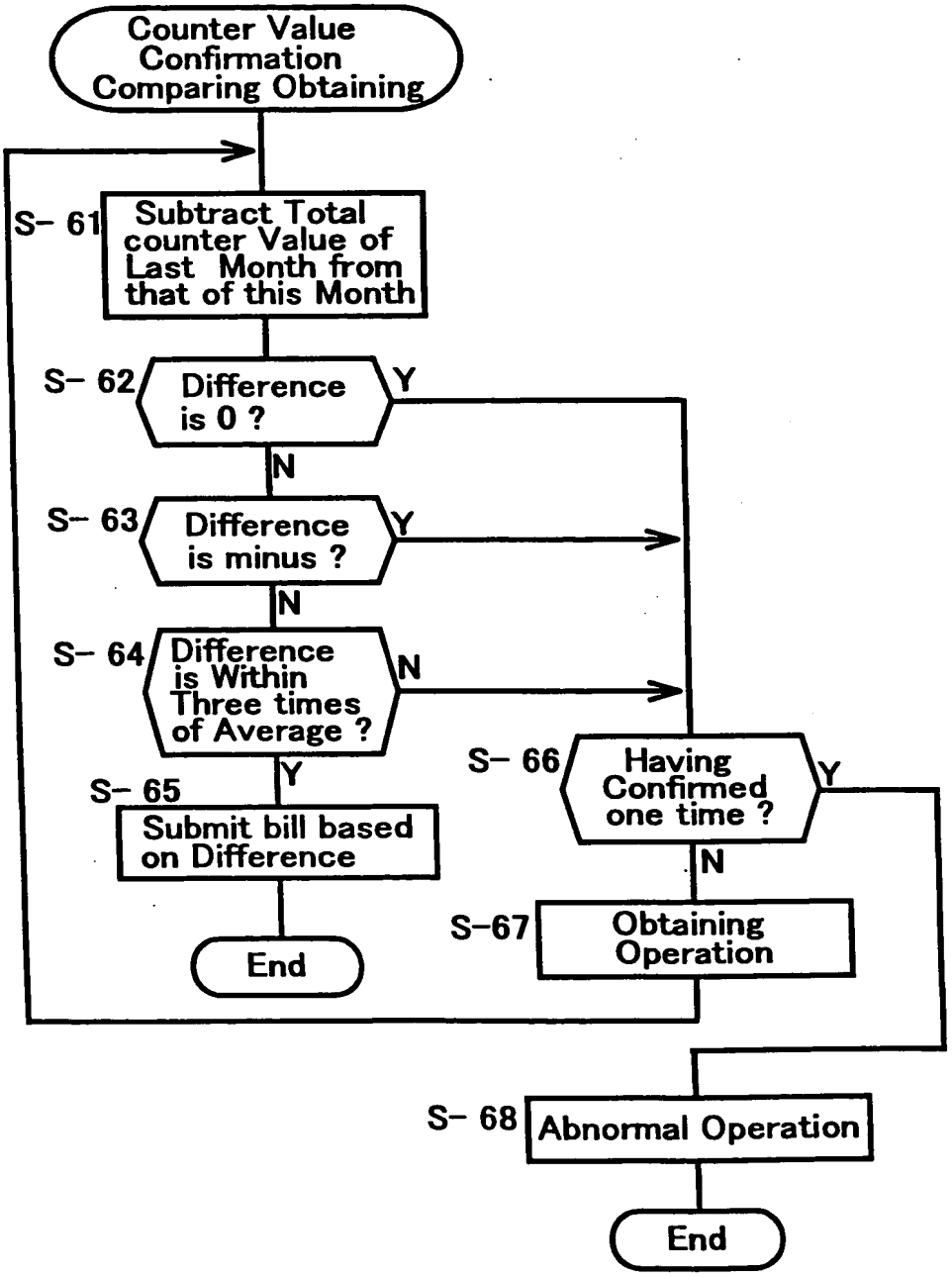

Counter Value Confirmation Comparing Obtaining
S- 61
Subtract Total counter Value of Last Month from that of this Month
S- 62
Difference is 0 ?
Y
N
S- 63
Difference is minus ?
Y
N
S- 64
Difference is Within Three times of Average ?
N
Y
S- 65
Submit bill based on Difference
End
S- 66
Having Confirmed one time ?
Y
N
S-67
Obtaining Operation
S- 68
Abnormal Operation
End

FIG. 34

Setting Amount for Model

No	Item	Setting Amount	Note
1	Model Machine Number	REEE-EE01	
2	Total Copy sheet Number 1	123456 Sheets	
3	Total Copy sheet Number 2	1500 Sheets	
4	Total Copy sheet Number 3	3000 Sheets	
5	Total Copy sheet Number n	1000 Sheets	
6	Total Copy sheet Number 1 Last Month	110456 Sheets	
7	Total Copy sheet Number 2 Last Month	1000 Sheets	
8	Total Copy sheet Number 3 Last Month	2000 Sheets	
9	Total Copy sheet Number n Last Month	800 Sheets	
10	Total Copy sheet Number 1 Average Value	13000 Sheets	
11	Total Copy sheet Number 2 Average Value	500 Sheets	
12	Total Copy sheet Number 3 Average Value	1000 Sheets	
13	Total Copy sheet Number n Average Value	200 Sheets	

FIG. 35

1. All Counter Values confirmation List

No	Model	Machine Number	Closing day	Existence of self Call generation
1	FFF	FF01	5	Self Call generation
2	EEE	EE01	15	Self Call generation
3	DDD	DD01	15	Self Call generation
4	CCC	CC01	5	Self Call generation
5	BBB	BB01	20	Self Call generation
6	AAA	AA01	15	Self Call generation
	⋮	⋮	⋮	⋮
n	AAA	AA01	15	Call up

2. Counter value for 15th Confirmation List

No	Model	Machine Number	Closing day	Existence of self Call generation
1	EEE	EE01	15	Self Call generation
2	DDD	DD01	15	Self Call generation
3	AAA	AA01	15	Self Call generation
	⋮	⋮	⋮	⋮
n	AAA	AA01	15	Call up

Fig. 36

1. Counter Value Confirmation Obtained List for 15th

No	Model	Machine Number	Closing day	Obtaining Time	Abnormal Condition	Call generating form	Number of Trying Times	Number of Total Copy Sheets 1	Number of Total Copy Sheets 2	Number of Total Copy Sheets 3	Number of Total Copy Sheets n
1	EEE	EE01	15	10:20	Normal	Self Call Generation	1	123456	1500	3000	1000
2	DDD	DD01	15	10:30	Normal	Self Call Generation	1	120056	5000	6500	2000
3	AAA	AA01	15			Self Call Generation	1				
4	AAA	AA02	15								
5	AAB	AA03	15								
	⋮	⋮	⋮								
n	AAA	AA02	15		No Response from other end of line	Call up	2				

2. Counter value Confirmation obtained List for 15th after obtaining again

No	Model	Machine Number	Closing day	Obtaining Time	Abnorma-lity Condition	Call generating form	Number of Trying Times	Number of Total Copy Sheets 1	Number of Total Copy Sheets 2	Number of Total Copy Sheets 3	Number of Total Copy Sheets n
1	EEE	EE01	15	10:20	Normal	Self Call Generation	1	123456	1500	3000	1000
2	DDD	DD01	15	10:30	Normal	Self Call Generation	1	120056	5000	6500	2000
3	AAA	AA01	15	12:10	Normal	Self Call Generation	1	120156	7000	5500	9000
4	AAA	AA02	15	11:10	Normal	Call up	2	130056	8000	9500	5000
5	AAB	AA03	15		BUSY	Call up	2				
	⋮	⋮	⋮								
n	AAA	AA02	15		No Response	Call up	2				

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08270 "98426160

Fig. 37

1. Counter Value Confirmation Not yet Obtained List for 15th

No	Model	Machine Number	Closing day	Obtaining Time	Abnormal Condition	Call generating form	Number of Trying Times	Number of Total Copy Sheets 1	Number of Total Copy Sheets 2	Number of Total Copy Sheets 3	Number of Total Copy Sheets n
1	AAB	AA03	15	10:20	BUSY	Call up	2				
	:	:	:								
n	AAA	AA02	15		No Response	Call up	2				

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